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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,440	11/20/2003	Michael Thomas Benhase	TUC920030133US1	2980

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KONRAD RAYNES & VICTOR, LLP.
ATTN: IBM37
315 SOUTH BEVERLY DRIVE, SUITE 210
BEVERLY HILLS, CA 90212

EXAMINER

CHEN, ALAN S

ART UNIT	PAPER NUMBER
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2182

MAIL DATE	DELIVERY MODE
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11/28/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/719,440

Applicant(s)

BENHASE ET AL.

Examiner

Alan S. Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-9, 11-13, 16-19, 21-23 and 26-29 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 10, 14, 15, 20, 24, 25 and 30-33 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Based on the amendment, the 35 USC §101 rejection has been vacated.
2. Applicant's arguments in light of the amendment filed 08/03/07, with respect to claims 4,5,10,14,15,20,24,25 and 30 have been fully considered and are persuasive. The prior art rejection of claims 4,5,10,14,15,20,24,25 and 30 has been withdrawn.
3. Applicant's arguments filed 08/03/07 with regard to remaining claims have been fully considered but they are not persuasive.
4. Per independent claims 1,11 and 21, Applicant argues that there is no teaching of disclosure of augmenting the I/O command with the generated identifier, the identifier identifying a destination.

Examiner first points out that under the broadest reasonable interpretation of the claims, the term "augment" simply means to change or modify. While it may connote some form of addition, this does not necessarily mean the command is enlarged. It can simply be construed to mean a positive change. In the reference to Ohno et al. (*Ohno*), the command is indeed modified. The command is modified to incorporate the actual address of the secondary target device. Fig. 4, step S417 expressly shows this. The address here is the identifier. This modification/conversion is performed at the first device. Column 13, lines 11-20 further describe this.

5. Per claims 2,3,6,8,9,12,13,18,19,22,23,28 and 29, Applicant does not put forth substantive arguments and therefore the rejection is maintained.

6. Per claims 7,17 and 27, Applicant applies the same arguments as for claims 1,11 and 21, and Examiner rebuttal was given above.

Claim Objections

7. Claim 5 is objected to because of the following informalities: The claim is dependent upon itself, which cannot be so. Examiner assumes the claim is actually dependent on claim 4. Appropriate correction is required.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1,2,6-8,11,12,16-18,21,22 and 26-28 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 7,051,121 to Ohno.

10. With regards to claims 1, 11 and 21, Ohno teaches receiving, at a first storage unit (*Fig. 4, element 10*), an I/O command from a host (*Fig. 4, step S412*); generating an identifier that identifies a destination to which the I/O command is to be transmitted (*Fig. 3, element 313*) from the first storage unit; augmenting the I/O command with the generated identifier at the first storage unit (*Fig. 4, element S417, address is converted to one that computes with the second storage control apparatus, Fig. 4, element 20*);

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and transmitting the augmented I/O command (*Fig. 4, element S417, transmitted to second storage control apparatus*).

11. With regards to claims 2, 12, and 22, Ohno teaches receiving the transmitted augmented I/O command at a second storage unit, wherein the second storage unit is associated with a second storage unit identifier (*column 4, lines 50-58*); determining, at the second storage unit, if the generated identifier that augmented the I/O command is the same as the second storage unit identifier (*inherent to receipt and execution, column 4, lines 50-58*); and executing the I/O command, at the second storage unit, in response to determining that the generated identifier that augmented the I/O command is the same as the second storage unit identifier (*column 5, lines 24-32*).

12. With regards to claims 6, 16, and 26, Ohno teaches the first storage unit is a primary storage control unit and the destination is a secondary storage control unit, and wherein the primary storage control unit is coupled to the secondary storage control unit (*first controls sending to second, column 6, lines 1-35*).

13. With regards to claims 7, 17, and 27, Ohno teaches receiving, at a storage unit, an I/O command (*Fig. 4, element 10*), wherein the storage unit is associated with a storage unit identifier (*Fig. 3, element 313, address being the identifier*); determining, at the storage unit, whether the I/O command is associated with an identifier that identifies a destination for which the I/O command is intended (*Fig. 4, S417, if the command is intended for the second storage control apparatus, the address is converted to that destination address; also, ID recognition, column 6, lines 19-35*), wherein the I/O command has been augmented with the identifier by another storage unit (*Fig. 4, step*

S417, modification of the address to destination address) from which the storage unit received the I/O command; and determining, at the storage unit, whether the identifier is the same as the storage unit identifier, in response to determining that the identifier associated with the I/O command identifies the destination for which the I/O command is intended (*ID correlation, column 6, lines 19-35*).

14. With regards to claims 8, 18, and 28, Ohno teaches executing the I/O command, at the storage unit, in response to determining that the identifier is the same as the storage unit identifier (*column 5, lines 24-32*).

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 3, 9, 13, 19, 23, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 7,051,121 to Ohno et al. in further view of 6,820,168 to Tanaka et al.

17. With regards to claims 3, 13, and 23, Ohno teaches receiving the transmitted augmented I/O command at a second storage unit, wherein the second storage unit is associated with a second storage unit identifier (*altering data and format for second storage unit, column 4, line 59, through column 5, line 23*), but fails to teach failure generation in response to the identifiers not being the same. However, Tanaka teaches determining, at the second storage unit, if the generated identifier that augmented the

I/O command is the same as the second storage unit identifier (*column 7, lines 11-32*); and generating a failure, at the second storage unit, in response to determining that the generated identifier that augmented the I/O command is not the same as the second storage unit identifier (*column 8, lines 7-24*). It would have been obvious to one of ordinary skill in the art at the time of inventions to combine the data routing of Ohno with the failure generation of Tanaka in order to prevent access errors.

18. With regards to claims 9, 19, and 29, Ohno fails to teach, Tanaka teaches generating a failure, at the storage unit, in response to determining that the identifier is not the same as the as the storage unit identifier (*column 8, lines 7-24*). It would have been obvious to one of ordinary skill in the art at the time of inventions to combine the data routing of Ohno with the failure generation of Tanaka in order to prevent access errors.

Allowable Subject Matter

19. Claims 4,5,10,14,15,20,24,25 and 30-33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is the statement of reasons for the indication of allowable subject matter: The prior art disclosed by the applicant and cited by the Examiner fail to teach or suggest, alone or in combination, ***all*** the limitations of the independent claim(s) (*claims 1,7,11,17,21 and 27*), particularly the generation of the identifier comprises associating with the identifier, a World Wide Node Name of the second storage control

unit; associating with the identifier, a World Wide Port Name; and associating with the identifier, a storage subsystem identification.

Conclusion

20. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan S. Chen whose telephone number is 571-272-4143. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Tsai can be reached on 571-272-4176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ASC
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